

A Summary of the action taken during the year to prevent the spread of Disease.

The following table gives the incidence of Notifiable Disease in the District:—

WARD	Scarlet Fever.				Diphtheria						Enteric Fever				Ery'pelas		Totals.	
	Jan.	Feb.	Oct.	Nov.	Mar.	May	June	July	Nov.	Dec.	Mar.	Aug.	Oct.	Dec.	April	July	1898	1897
Heaton Chapel	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	3	8
Heaton Moor East ...	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	9
Heaton Moor West ...	1	0	0	1	0	0	0	1	1	0	1	1	0	0	0	0	6	8
Heaton Mersey	4	5	0	0	3	5	2	0	0	0	0	0	0	1	0	1	21	55
<i>Total.....</i>	5	5	1	2	3	5	2	1	1	1	1	1	1	1	1	1		
	{				{						{				{			
1898	13				13						4				2		32	
1897	66				5						4				4			80

NOTE:—In 1897, a case of Puerperal Fever was reported which is included in the last column, but not in the bottom line.

Of these cases, 12 were removed to Hospital at the expense of the District Council, viz:—

Scarlet Fever: 7; Diphtheria: 4; Enteric Fever: 1.

SCARLET FEVER.

The statistics of this disease are of a more favourable character than those of last year. The cases reported in January and February were the tail end of an epidemic which had prevailed in Heaton Mersey in 1897, and it is satisfactory that the disease did not recur during the year. There is no doubt this result was owing to the prompt removal to hospital of the cases as they arose, to the particular care exercised in those treated at home, and to the thorough disinfection of premises. One case appeared to arise from infection from another member of the family on his return from hospital.

Of all the cases notified only 2 died, one of which, a child aged 2 years, belonged to Heaton Mersey, who died in hospital.

DIPHTHERIA.

Of this disease, we had what is for us a large number of cases, viz:— 13. Ten occurred in Heaton Mersey; of these, 4 were removed to hospital at the Council's expense, one of which died there. There were 6 deaths out of the 10 cases. The remaining 3 cases were in different parts of the District, and had no connection with each other.

There were two outbreaks of the disease in Heaton Mersey, one of 3 cases in March, and one of 7 cases in May and June. I could not account for the first outbreak, unless it arose from contiguity with Scarler Fever, the two diseases often co-existing.

With regard to the second outbreak, it was confined to a small area whose sanitary condition was found to be very unsatisfactory; broken drain pipes, polluted soil, and a black, slimy deposit on a wall close to the cottage doors, in a yard which is situated, as it were, at the bottom of a well; this was all put right, and the result was satisfactory, as no more cases arose. The slimy deposit is unavoidable, as it is formed by percolation of water from high ground; it will have to be frequently removed, and the wall lime-washed. These cottages are very old, and would not, I think, be permitted now to be erected in this situation. One of the 7 cases most probably arose from association with other cases at school.

Instructions were given to the head-master of the parish schools, to send home all children who appeared to have sore throat, and to furnish me with their names and addresses for investigation.

Gross carelessness was shewn in one family where children were admitted to see the body of a child who had died of Diphtheria, and which it was intended to remove to another cottage previous to interment.

The case in November in West Ward, received its infection from a child who had been sent to Heaton Moor to recruit after a severe attack of the disease. Isolation was strictly carried out, the parents perceiving the value of this measure, with the result that, though the other children of the family remained at home, none became infected. This case was a very severe one, and the value of Diphtheria Antitoxin as a cure was signally demonstrated. I consider the use of this preparation as a means of treatment and prevention, of the utmost value from a public health point of view, and I think the Council might consider the advisableness of supplying it to necessitous cases gratuitously.

In this connection, I might repeat a former recommendation, viz:— To provide at the public expense, a Bacteriological Examination in cases of Diphtheria and Enteric Fever, the advantage of it being, that it renders the recognition of the disease certain, and affords distinct evidence, in the former disease, of the presence or absence of infection during convalescence. In the case alluded to, though the patient was apparently quite well, infection did not leave the throat for a month afterwards as was ascertained by this new method, and if the parents had not gone to this trouble and expense, the patient would have mixed with other people, and perhaps spread the disease far and wide.

ENTERIC FEVER.

We had 4 sporadic cases of this disease, the same as last year; 2 of them were contracted elsewhere, and one arose from bad sanitary conditions.

Account of the Sanitary state of the District generally at the end of the year.

There were two cases of Diphtheria, none of Scarlet Fever, and one of Enteric Fever under observation at the end of the year.

The drinking water is of good quality, but spoiled by absence of filtration.

The old fashioned privies built up against the house wall, generally the kitchen, are gradually being removed; and when through defects attention is called to house drains, they are remodelled, where it can be done, according to the places recommended in the new bye-laws. Some of our side roads are in a very bad state, owing partly to difficulties with the Local Government Board, which insists on our buying more land for filtration purposes; a condition the reasonableness of which is open to some discussion, considering that with our present method of sewage treatment our effluent ranks in the 1st class among 55 authorities in the excellence of its quality.

Account of enquiries made as to conditions injurious to health existing in the District, and the proceedings in which the Medical Officer of Health has taken part, or advised under the Public Health Act, 1875.

Investigations have been made into complaints and other matters as follow:—

1. Drain nuisances.
2. Visits of inquiry respecting infectious diseases and examination of children supposed to be suffering from such diseases.
3. Manure nuisances.
4. House nuisances.
5. Drinking water.
6. Ashpits.

Special Reports: Black Brook.
Farms.

DRAINS.

The nuisances from defective drains were similar to those of previous years, and were dealt with as promptly and thoroughly as circumstances permit. One very important nuisance was in connection with an outbreak of Diphtheria referred to on a former page.

DRINKING WATER.

There were several complaints during the year of the bad condition of the drinking water; on analysis however the water was found to be good apart from the sediment which was due to disturbance caused by frequent repair. These complaints it seems to me might be avoided by filtration by the Water Company. One sample of spring water which supplied a number of cottages, was found to be polluted. Town's water was ordered to be substituted, and has been done.

ASHPITS AND PRIVIES.

I have in previous reports referred to the bad situation of many of these structures; they are found in connection with property built many years ago and are gradually being dealt with by removal or by conversion to water closets. One old structure in Heaton Mersey, calculated to hold many tons of refuse, situated in the midst of a group of cottages, has been cleared away, and separate small ashpits substituted.

THE BLACK BROOK.

I examined this stream again by request of the District Council, and I found it just as black and offensive as it was at my visit 12 months previously; it is nothing but an open sewer, and is a serious nuisance to adjoining houses.

FARMS.

Some farms I found on inspection to be hardly so clean as they might, and the cows in several cases dirty. The question of Tuberculosis as conveyed by means of milk is a serious one, but the question of mere cleanliness is a more crying evil. It is quite the exception to see cows clean on their hind quarters, and want of cleanliness in one particular is likely to be accompanied by want of cleanliness in other directions. Dirt finding its way into milk from unclean surrounding is supposed to be got rid of by straining, but the deposit which is often found in the milk basin proves that this is not accomplished. Be it remembered that Diphtheria and Enteric Fever are dirt diseases, that is, diseases which are likely to arise in localities where dirt abounds. Apart from these diseases, I have no doubt many of the minor stomach and bowel disorders of childhood arise in this way.

Mechanical milking, and all the rest of the care that this term implies, should be the order of the day. This and the exclusion of tubercular cattle would render milk safe for consumption in the unboiled state. There is no doubt by the evidence of most children, that milk is more palatable in the uncooked state, as Nature intended it to be.

The cubic space of shippons requires attention on most farms. I hope gradually to effect an improvement in this respect, as has already been accomplished at one farm which formerly was in a very bad state.

*Tabular statement of mortality within the District,
classified according to Diseases, Ages, and Localities.*

The area of the District is 1638 acres, and the population at the middle of 1898, was 9177, and at the end of the year, 9200. This figure is probably too low, as a great deal of building has been in operation during the last 12 months; I have therefore taken this figure as probably correct for the

middle of the year, and I have based my calculations on it. During the year 108 deaths were registered. By adding to this number the deaths that occurred outside the District of persons who belong thereto, and subtracting those which occurred within the District of persons who do not belong thereto, (for instance, those at Mauldeth Hospital, where 8 deaths occurred. viz:— 3 of males and 5 of females,) the number of deaths to be accounted for, is found to be 102, viz:— 54 of males and 48 of females, as compared with 31 of males and 51 of females last year. 102 deaths are equal to a death rate of 11·08 per 1000 of population. The death-rate for England and Wales for 1898 is 17·6. The Coroner held 5 inquiries.

The deaths in each month were

January	13	April	8	July	11	October	11
February	16	May	6	August	5	November	1
March	10	June	7	September	8	December	6

The births were 145 viz., 81 males and 64 females as compared with 71 males and 62 females last year. 145 births are equal to a birth-rate of 15·76 per 1000 of population. The figure for England and Wales is 29·4.

The following table gives the particulars for each Ward.

Ward	P'lation	No. of Deaths		Death Rate	No. of Births.		Birth Rate.
		M.	F.		M.	F.	
Heaton Chapel	1968	10	12	11·17	17	14	15·75
Heaton Moor East	2127	11	9	9·40	14	15	13·63
Heaton Moor West	2018	9	5	6·93	22	11	16·35
Heaton Mersey	3087	24	22	14·90	28	24	16·84
Whole District.....	9200	102		11·08	145		15·76

The following table gives the number of deaths at all ages, and from the principal diseases.

Mortality from all causes at subjoined ages.								Mortality from subjoined causes distinguish- ing deaths of children under 5 yrs. of age.												
WARD	At all ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards		Scarlet Fever.	Diphtheria	Diarrhoea	Rheumatic Fever	Phthisis	Bronchitis, Pneu- monia and Pleurisy	Heart Disease	Influenza	Injuries	All other diseases	Totals	Totals when line 5 added to the re- spe tive localities
Heaton Chapel Ward	24	3	1	0	1	9	10	Under 5 5 and upwards..	0	0	0	0	0	0	0	0	0	4	4	4
Heaton Moor East Ward ...	17	4	0	1	2	4	6	Under 5 5 and upwards..	0	0	0	0	1	5	2	0	2	10	20	20
Heaton Moor West Ward ...	16	3	1	0	2	7	3	Under 5 5 and upwards..	1	0	0	0	0	0	0	0	0	3	4	4
Heaton Mersey Ward	43	11	7	4	2	10	9	Under 5 5 and upwards..	0	2	4	0	1	4	0	0	0	7	18	20
Deaths outside the District, of persons belonging thereto	6	0	2	0	0	3	1	Under 5 5 and upwards..	1	1	0	0	0	0	0	0	0	0	2	0
Mauldeth Hospital	8	0	0	0	0	7	1	Under 5 5 and upwards	0	0	0	0	0	0	0	0	0	0	0	0
								Under 5 5 and upwards..	2	3	4	0	1	4	0	0	0	18	32	32
Total ...	114	21	11	5	7	40	30	Under 5 5 and upwards..	0	3	0	1	4	19	8	1	3	43	82	82
Deaths within the District, of per sons not belong- ing thereto, and at Mauldeth Hospital...	12	0	0	0	0	10	2	Under 5 5 and upwards..	0	0	0	0	0	3	1	0	1	7	12	12
Total Nett Deaths	102	21	11	5	7	30	28	Under 5 5 and upwards	2	3	4	0	1	4	0	0	0	18	32	32
									0	3	0	1	4	16	7	1	2	36	70	70

Of children under 1 year, 21 deaths are recorded. This is equal to an infant mortality of 144 per 1000 births, or 20·6 per cent of the total deaths. The corresponding figure for England and Wales is 161·0 per 1000 births.

Of children aged 1 year and under 5, there are 11 deaths recorded. This is equal to 10·8 per cent of the total deaths.

There were 12 deaths from the ordinary infectious diseases, including 4 from Diarrhœa which in many cases is a dietetic disease and not an infectious or zymotic disease. This is equal to a death rate of 1·3 per 1000 of population. For England and Wales this is 2·22.

The following table gives these figures along with those of previous years.

Year	Population.	Death-Rate.	Birth-Rate	Infant Mortality	Zymotic Death-Rate
Average of 10 years 1882-91...	6672	11·52	20·23	19·80	1·26
1891	7150	10·76	17·77	11·68	1·12
1892	7440	13·03	18·80	17·52	0·67
1893	7500	13·70	16·40	15·63	1·46
1894	8000	10·37	21·75	18·00	1·00
1895	8172	11·50	17·74	18·00	0·36
1896	8235	13·60	15·17	18·70	0·72
1897	9155	8·95	14·52	13·40	0·80
1898	9200	11·08	15·76	20·60	1·30

The following table gives the number of deaths at various age-groups compared with previous years.

Year	At all ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards
1892	97	17	7	6	2	41	24
1893	103	16	7	14	8	35	23
1894	83	15	10	2	1	35	20
1895	94	17	9	4	5	39	20
1896	112	21	5	6	7	36	37
1897	82	11	4	2	4	38	23
1898	102	21	11	5	7	30	28

The following table shews the number of deaths from the ordinary infectious diseases.

	Average for 10 years, 1882-91.	1891	1892	1893	1894	1895	1896	1897	1898
Measles.....	1.3	1	0	0	6	0	0	0	0
Scarlet Fever	1.0	3	0	3	0	1	3	0	2
Diphtheria	1.0	0	2	4	1	2	0	2	6
Whooping Cough	1.7	2	3	1	0	0	1	1	0
Enteric Fever	1.5	1	0	1	1	0	2	1	0
Diarrhœa	2.0	1	0	3	0	0	0	3	4
Puerperal Fever ...	0.0	0	0	0	0	0	0	1	0
<i>Total.....</i>	8.5	8	5	12	8	3	6	8	12

The following table shews the mortality from certain classes of disease, the proportion to population, and to 100 deaths.

	Total Deaths	Deaths per 1000 of population	Proportion of Deaths to 100 Deaths
Seven principal Zymotic Diseases..	12	0.3	11.7
Bronchitis and Pneumonia, not including Phthisis.....	20	2.17	19.6
Tubercular Diseases, (Phthisis, Scrofula, Rickets, Tabes).....	7	0.76	6.86
Wasting Diseases (Atrophy, Debility, and Premature Birth)	7	0.76	6.86
Convulsive Diseases	4	0.43	3.9

The chief observation to make regarding these statistics is the large number of deaths of children under 1 year of age viz., 21. They are to be apportioned as follow:—

WARD.	Deaths under 1 year.	Infantile death rate per 1000 births.
Heaton Chapel Ward	3	96
Heaton Moor East Ward	4	138
Heaton Moor West Ward	3	91
Heaton Mersey Ward..... (A working class population.)	11	211

These deaths may be classified as follow:

Whole District.			Heaton Mersey.		
Premature Birth	4	} 11	0	} 4	
Atrophy	3		2		
Convulsions	4		2		
Diseases of Respiration not including Phthisis.	3	} 3	3	} 3	
Rickets	2		0		
Diseases of Digestion ...	2	} 7	1	} 4	
Diarrhœa	3		3		

Though most of these deaths occurred in cottages in populous neighbourhoods, they can hardly be ascribed to sanitary defects in the ordinary acceptation of the term, for if it were so, the cases would have been grouped in particular localities.

Diet diseases form a large proportion of the causes of death, and these must be ascribed to errors in feeding and to want of care in household management. I have seen milk kept in places most unsuitable, when it could hardly fail to absorb unpleasant odours or to become sour. Milk should be kept in a cool, well ventilated place. This is not always feasible; a good place, and one always available, would be a covered cage on the wall outside the house.

Sour milk or damaged milk cannot be made sweet by boiling. Perhaps it is owing to the proneness of milk to undergo changes, that artificial foods are so much used; they have this advantage, that being in a powder, they do not readily undergo decomposition.

METEOROLOGICAL REPORT, for 1898.

JANUARY—The weather was variable: dullness and wet interspersed with brightness and sunshine, and on the whole cheerful and satisfactory. New Year's day was

particularly fine. The Barometer ruled high. There was a good deal of mist, and S.W. winds prevailed. On the 31st the wind changed to N.W., introducing stormy weather.

FEBRUARY—Stormy weather prevailed for 8 days, with W.N.W. winds, snow and hail on the 7th; afterwards, pleasant warm weather with southerly breezes was interrupted by a short stormy period followed by fine, bright, sunny, cold weather with a little snow. At the close we had rain again, and high variable winds, mostly northerly. The Barometric curve was very jagged and irregular. Mist observed on five occasions.

MARCH—On the 1st there was a thunderstorm with large hail-stones. The weather generally was fine, bright and sunny, cold at first, with N.E. winds, afterwards warm, with W.N.W. winds and frosty evenings. From the 23rd we had four stormy days with variable winds and blizzards. There was a good deal of mist, and dense fog on one occasion.

APRIL—The weather on the whole was fine, bright, sunny and warm, with cool evenings. The 7th and 8th were hot day and we were able to dispense with fires. The winds were chiefly S.W., and towards the end of the month S.E.

MAY—This month was bright, warm and sunny, with at first a good deal of rain and N.W. winds. On the 18th, with a change of wind to S.E., the weather became fine, sunny and cool.

JUNE—The first half of the month was fine, bright, sunny and warm, and latterly decidedly hot; the 2nd half was dull and wet. On the 26th, a slight thunderstorm.

JULY—A fine, bright, hot month. Summer lightning on the 22nd.

AUGUST—The early part of the month was bright, wet, stormy and cool; on the 8th there was a thunderstorm with

hail. The rest of the month we had fine, hot weather, with N.E. winds and thunderstorms on the 21st and 28th. The last three days were dull, wet and stormy, with W.N.W. winds.

SEPTEMBER—A fine bright, sunny, hot month, warm winds and little rain.

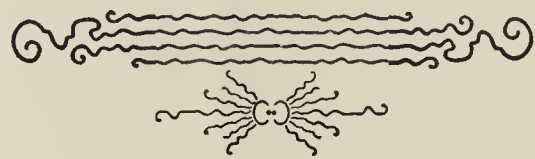
OCTOBER—The first ten days were fine, bright, sunny and warm, with morning mist and S.E. winds. There was then a change, the barometer fell quickly and as quickly resumed its former high position, the weather being dull and wet, rather variable as regards temperature, and the winds south westerly. The last few days, with another short dip in the atmospheric pressure, were fine, dull and warm, with very wet nights.

NOVEMBER—The weather was very unsettled, pleasant on the whole, and April-like in character. Warm and sunny at first, the temperature rapidly fell though it varied. Afterwards, with an overcast sky and winds varying from S.E. to N.W., dull weather set in and fogs were prevalent, being very cold at times. There was not much rain; a heavy fall of snow occurred in the early morning of the 23rd, the barometer falling suddenly, seven tenths of an inch during the night, it continued to fall, and reached its lowest point of the year, 28.761, on the morning of the 25th, and though we had very little stormy weather here, other places suffered a good deal in this way.

DECEMBER—A very wet month, dull and varying in temperature, sunny at times; rather stormy at the close, winds mostly W.N.W. Four lovely days in the third week. Fog observed on six occasions.

	Mean Reading of Barometer.		Mean daily temperature.		Rainfall in inches	
	1897	1898	1897	1898	1897	1898
1st Quarter ..	29.667	29.977	40.1	40.6	5.510	4.820
2nd Quarter ..	29.925	29.866	50.4	50.1	7.510	8.155
3rd Quarter..	29.918	30.059	59.0	59.4	9.635	7.145
4th Quarter...	30.042	29.840	45.7	46.7	9.660	8.285
					32.315 on 201 days	28.405 on 197 days

	1897			1898		
Highest reading of Barometer ...	30.687	on	Nov. 20	30.598	on	Jan. 15
Lowest " "	28.618	"	Mar. 3	28.761	"	Nov. 25
Highest temperature in shade.....	84.5	"	Aug. 4	82.0	"	Sept. 5
Lowest " "	18.1	"	Jan. 25	23.8	"	Feb. 22
Highest weekly mean daily temp.	66.4	in	4th week June	65.1	in	3rd week Aug.
Highest monthly mean daily temp. hottest month	60.6	in	August.	60.3	in	Sept.
Lowest monthly mean daily temp. coldest month	36.7	in	January.	38.5	in	March
Highest temperature in sun, Black bulb in vacuo	134.0	on	July 11	130.2	on	Aug. 2
Lowest temperature on the grass.	7.0	on	Feb. 28	10.0	on	Nov. 22
Wettest month: inches of rain.....	4.705	in	November	5.885	in	August
Greatest fall of rain in 24 hours in.	1.550	on	Nov. 30	1.040	on	Aug. 27
Most wet days	25	in	August.	25	in	December
Fewest wet days.....	9	in	October.	9	in	September



Summary of METEOROLOGICAL OBSERVATIONS.

Taken at 9 a.m. daily, by F. W. JORDAN, M.D.

BAROMETER				TEMPERATURE.						Humidity		RAINFALL.				Average cloud at 9 a m. daily
Cistern 240ft. above sea-level. Reduced to sea-level and to 32 degs. F.				In Shade.		In Sun	In Grass	Earth	2ft. dp.	Average per cent at 9 a.m.	Total amount in inches.	Depth	Date.	Days on which rain fell.	entirely over-cast—100.	
Month	Highest	Lowest	Average	Highest	Lowest	Mean daily temperature	Black bulb, highest	Bright Bulb same day as blk	Lowest	Mean daily temperature	Average per cent at 9 a.m.	Total amount in inches.	Depth	Date.	Days on which rain fell.	entirely over-cast—100.
1898																
JANUARY	30.598	29.341	30.115	55.5	30.5	42.6	80.0	58.0	24.0	42.2	88	1.725	0.510	4	11	93
FEBRUARY	30.291	29.158	29.925	58.5	23.8	40.8	97.5	71.5	15.0	42.4	85	1.980	0.410	28	21	89
MARCH	30.284	29.408	29.891	57.2	25.0	38.5	103.0	63.0	14.5	39.5	86	1.115	0.260	17	14	93
APRIL	30.204	29.261	29.891	74.2	29.5	46.7	114.0	78.5	20.0	44.6	77	1.880	0.660	11	14	83
MAY	30.339	29.076	29.772	68.0	35.0	49.3	120.8	82.8	20.0	48.4	78	3.310	0.740	10	19	82
JUNE	30.342	29.363	29.936	73.0	36.5	54.3	127.0	85.0	26.5	54.3	77	2.965	0.690	21	17	83
JULY	30.287	29.627	30.085	74.5	40.0	58.1	125.0	89.5	25.5	58.0	77	0.680	0.220	1	13	77
AUGUST	30.278	29.599	30.012	81.0	43.5	59.9	130.2	88.5	29.5	59.0	80	5.885	1.040	27	18	80
SEPTEMBER	30.404	29.579	30.080	82.0	36.0	60.3	130.0	97.0	20.0	58.5	79	0.580	0.160	29	9	68
OCTOBER	30.382	28.863	29.777	66.0	36.0	51.4	111.0	77.0	20.0	51.9	89	3.440	0.490	31	20	91
NOVEMBER	30.350	28.761	29.754	59.5	27.0	43.6	99.0	68.0	10.0	46.7	89	1.795	0.450	12	16	86
DECEMBER	30.425	28.992	29.989	58.0	30.0	45.2	88.0	64.5	12.5	44.1	87	3.050	0.890	26	25	85

